74220

OPEMUS III

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OPEMUS III
ENLARGER DESCRIPTION AND DIRECTIONS FOR USE 74220

Description of apparatus

The OPEMUS III enlarger is designed for enlarging photographic pictures from negatives of 6×6 cm in size and smaller, made on 60 mm roll films or 35 mm cine films, possibly also on 70 mm films. The OPEMUS III enlarger can be provided with special accessories (Meocolor) for making colour enlargements. An opal bulb for enlargers, of 100 W power input and 60 mm minimum bulb diameter, equipped with an E 27 base, is applied as a source of light. On the top of the lamp mount cooling orifices are provided, through which the warmed up air escapes from the lamphouse (see Fig. I-13).

The apparatus is equipped with a four-glass Belar anastigmat f/4.5, F = 75 mm (Fig. I-9). The lens is screwed into a special ring which is fixed in the apparatus by means of a dovetail groove and locked with a milled turnknob.

With the aid of an F = 75 mm standard lens, an approx. 6.7 × maximum linear magnification on the baseboard can be attained. Since the apparatus can be rotated on the baseboard round its vertical axis, a higher grade of magnification can be attained outside the baseboard, e.g., on the floor. By turning the apparatus proper on the stand into the horizontal position, arbitrarily large magnifications can be obtained by projecting upon a vertical plane, for instance, against a wall. The minimum linear enlargement of the image upon the baseboard is approx. 0.7 ×, i.e., a 1.4×reduction. With the aid of the given apparatus a partial restitution of images can be carried out, whereby the converging lines in the negative, arising when making photographs of architectural constructions, buildings, streets, etc. can be partly corrected.

The condenser is composed of two equal plano-concave lenses inserted in a metal mount. A mounted ground-glass (focussing creen) can be set on the condenser so that the work is then done in a slightly diffused light.

The OPEMUS III is provided with a metal carrier for negatives (Fig. I-11) fitted with a slit-line focussing system, two glasses and two adjustable guide pins (stops) for correct guiding of the film band. The negatives are placed into the carrier either in whole bands or cut into individual frames. The masks for masking off the undesirable light are located directly in the carrier and their sliding movements are independable of each other. The size of the opening is arbitrarily adjustable without having to remove the carrier from the apparatus. The film band in the carrier is held by two glasses, by the pressure of two springs which — after the carrier has been lifted allow the film band to be shifted as required. The oblique rod of the stand (Fig. I-7) is graduated so as to provode for the possibility of ascertaining or adjusting the linear magnification and of computing the exposure time when the magnification grade is being changed. The sliding motion of the apparatus on the stand and the focussing of the lens are carried out with the aid of a friction mechanism which does not allow any idle run.

The baseboard of the apparatus is 390×565 mm in size and is made of polished veneered blockboard.

The two-strand lead-in cable is 3 m long and is provided with a feed-through switch and a plug.

When utilizing special accessories available on special order, the OPEMUS III enlarger becomes a universal apparatus which can be applied for photographing, reproducing, etc.

Weight of apparatus: 7.87 kg approx.

Height of apparatus:

maximum (i.e., working height) . . . 950 mm,
minimum (i.e., storing height) . . . 750 mm

1 – **Baseboard**
2 – **Foot (base)**
3 – **Connecting cord**
4 – **Focussing knob**
5 – **Sliding mount**
6 – **Manual turnknob**
7 – **Oblique rod**
8 – **Filter**
9 – **Lens**
10 – **Lens carrier**
11 – **Negatives carrier**
12 – **Condenser box**
13 – **Lamphouse**
14 – **Feed-through switch**
15 – **Focussing equipment rod**
16 – **Screws of the condenser box**

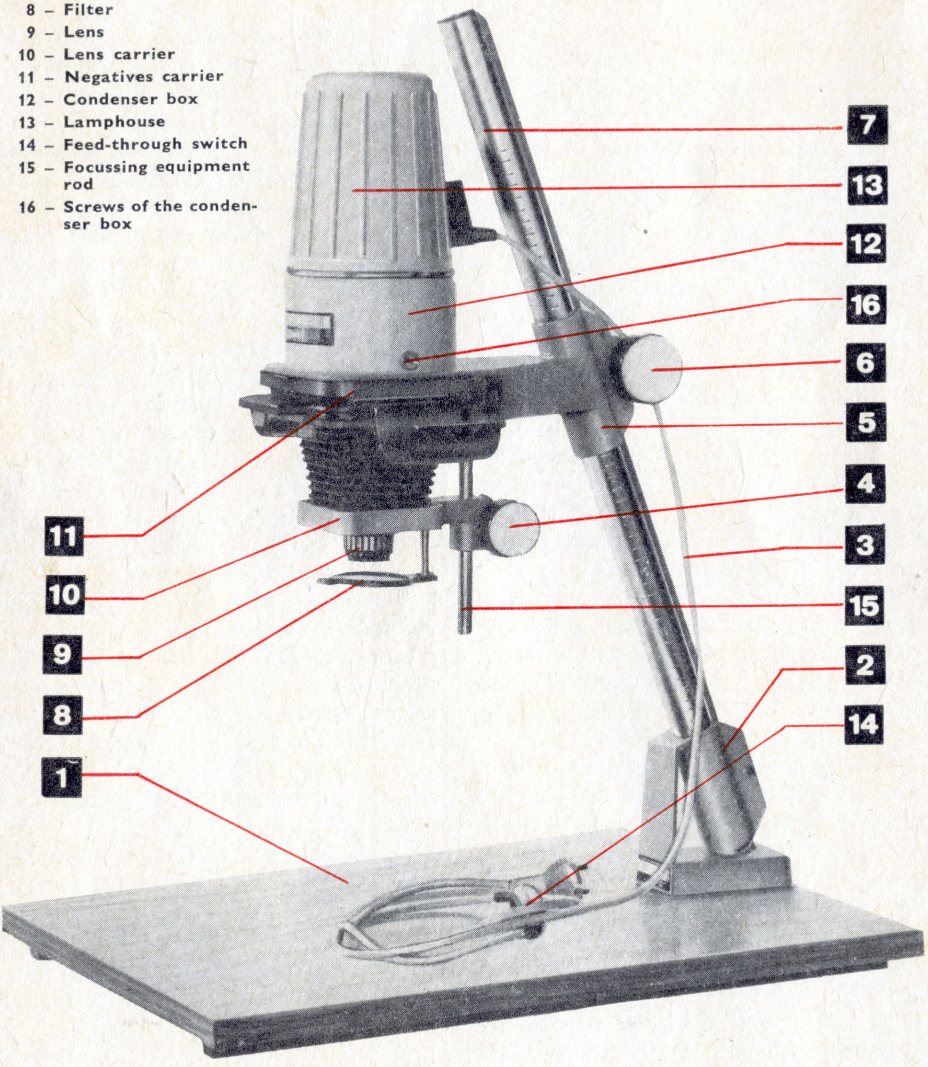


Fig. 1

INSTRUCTIONS FOR USE

1. Light source — the lamp

An opal lamp for enlargers, of 100 W maxim. power input, 60 mm minim. bulb diameter and E27 base is used as the light source.

2. Insertion and replacement of lamp

The enlarger is supplied without the lamp. It is imperative to disconnect the apparatus from the el. mains when inserting the lamp into the instrument. Loosen the lamphouse (Fig. II-2) by turning it a little to the left and take the latter out by pulling it upwards. The lamp is located in the lamphouse in such a way that when being screwed into its mount it simultane-

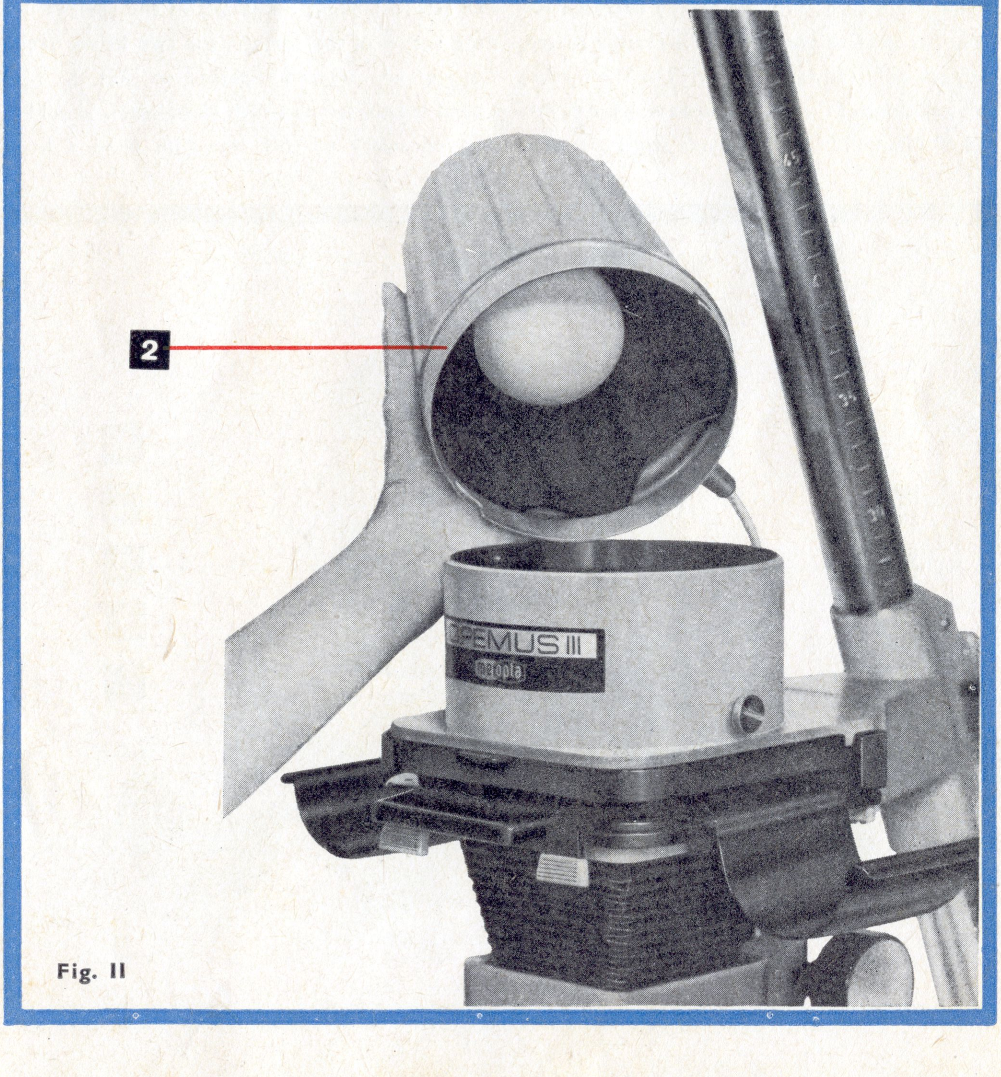


Fig. II

ously takes up a central position so that any additional adjustment can be dispensed with. It is not advisable to use lamps provided with inscriptions on the top of the bulb; neither is it recommended to use such lamps that show unevenness in their glass.

3. Insertion of a negative into the carrier

Take the carrier out of the apparatus; open it and set up the guide stops (Fig. III-1) so that correct guiding of the film band is ensured. If the guide stops are set to the extreme position, as close as possible to the carrier centre, they are adjusted for a 35 mm film. The further two positions of the guide stops serve for 40 mm and 60 mm roll films. The guide stops are to be set up to the farthest extreme position from the carrier centre when removing the glasses from the carrier for cleaning or changing. The 70 mm film band is guided by means of bosses in which the bottom glass is secured. Place the film band or its cut part into the carrier to the guide stops, with the sensitive layer downwards, i.e., towards the lens, and closse the carrier. Place the coiled loose ends of the film band into the film holders (Fig. III-2).

Reinsert the carrier into the apparatus, overcoming the slight resistance of the springs. By the action of the springs, the two halves of the carrier are pressed together so that the film band is held fast between the glasses. Should it be necessary to shift the film band a little

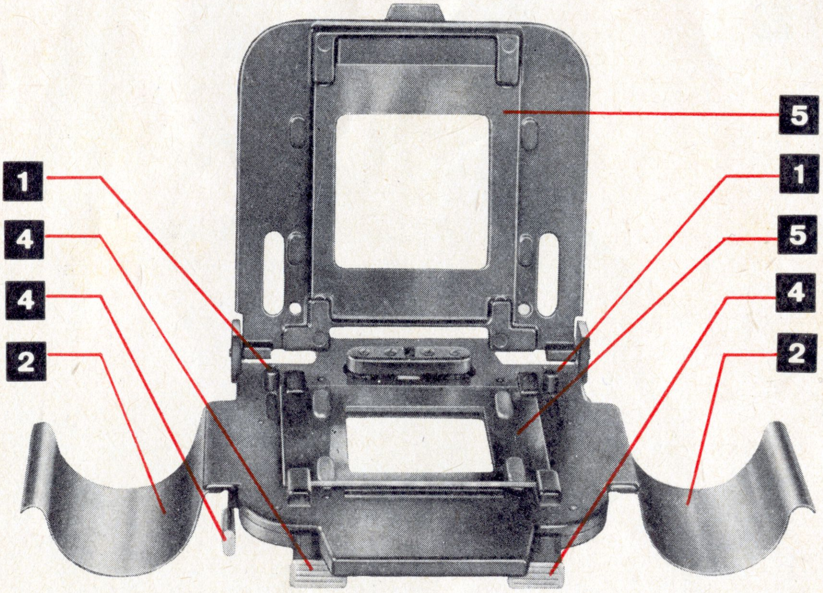
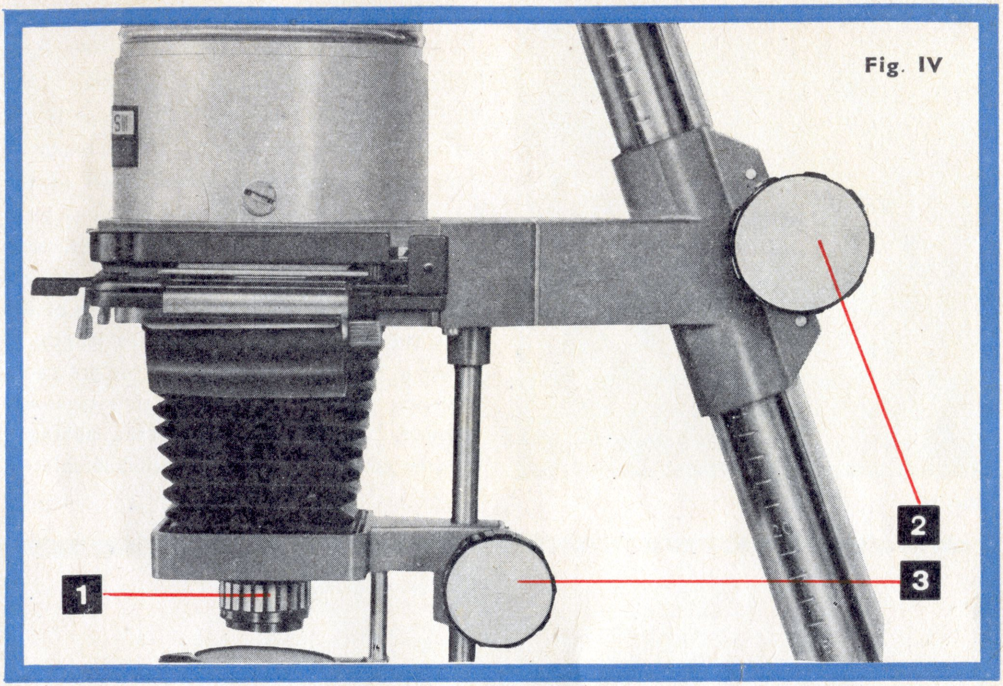


Fig. III

Fig. IV



in the carrier, lift the upper part of the carrier (Fig. VI-3). In this way the two halves of the latter are loosened and the film band can be moved to and fro without any risk of damage. When moving the film band, hold its opposite edges carefully with two fingers so as to avoid touching the sensitive layer. Having adjusted the film band to the required position, release the upper part of the carrier.

4. Setting the required magnification of the image

Open fully the lens diaphragm by rotating the stop ring (Fig. VI-1) up to its limit position, so that the stop number 4.5 is set opposite the white mark. By rotating the turn knob (Fig. IV-2) the apparatus proper is raised or lowered on the stand until the required grade of magnification is attained. Simultaneously, continue focussing of the image on the auxiliary paper by rotating the focussing knob (Fig. IV-3) and adjust the auxiliary paper so that the projected image be correctly positioned.

5. Focussing of image

After having set the required magnification grade, the image has to be focussed accurately. As has been explained in the preceding paragraph, the focussing of the image is effected by rotating the focussing knob (Fig. IV-3), the lens moving simultaneously upwards or downwards along the rod of the focussing system (Fig. I-15). For fine focussing the negatives carrier is equipped with a slit-line focussing system, (Fig. V) operated in the following manner:

Pull the carrier partly out of the apparatus

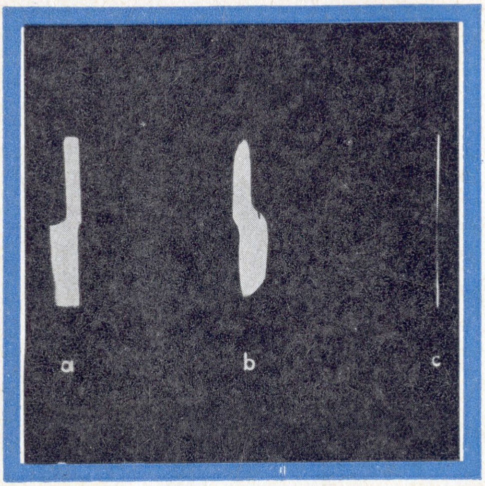


Fig. V

up to the spring-loaded stops. The image on the image plane disappears, being replaced by a luminous trace formed by the projection of the slit-line focussing system. If the image is not focussed properly, the shape of the luminous trace will be similar to that shown in the Fig. Va, or Vb. Next, rotate the focussing knob (Fig. IV-3) either in the clockwise or anticlockwise direction until the luminous trace acquires the form of a continuous straight line of the same thickness all along its entire length, as shown in Fig. Vc. In this way also the precision-focussing of the negative is simultaneously attained. Replace the carrier into the apparatus; the whole focussing procedure is thus completed.

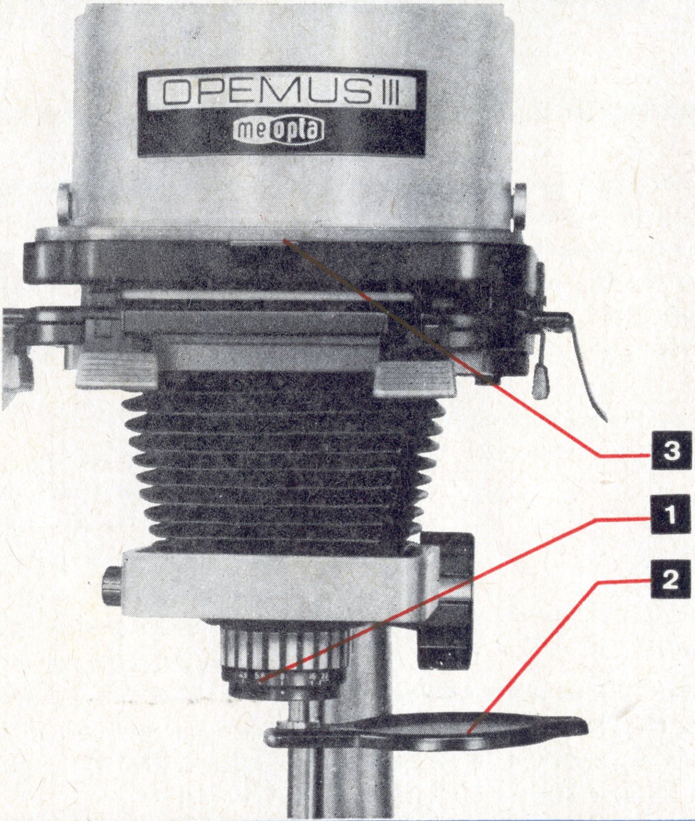


Fig. VI

6. Mask-bordering of the negative or its cut-out

When the required magnification grade has been set and the image properly focussed, the effective area of the image is to be bordered with the aid of sliding masks mounted directly in the bottom part of the negatives carrier (Fig. III-4). In this way diffusion of undesirable light into the adjacent neighbourhood and the resulting quality-impairing of the positive image is prevented.

7. Stopping down of lens

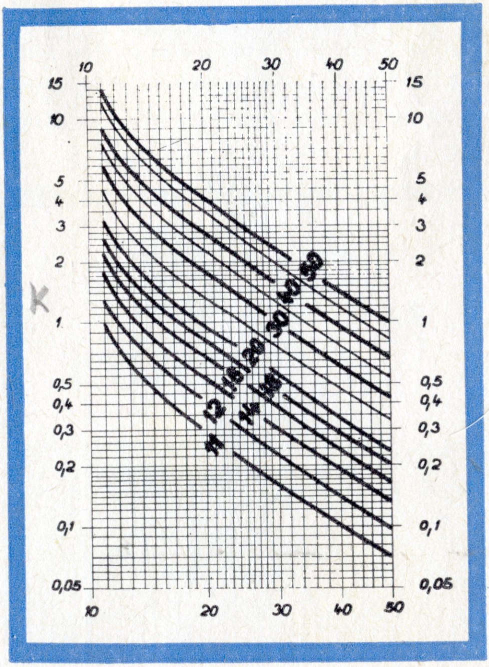
The focussing and masking-off procedures completed, adjust a suitable stopping down of the lens by rotating the stop ring (Fig. VI-1). The stop ring is marked with figures indicating the respective stop number, i.e.: 4.5, 5.6, 8, 11, 16, 22. The selected stop number has to be set opposite the index mark on the lens tube. The higher the stop number set against the index mark, the more stopped down is the lens and the smaller is the volume of light passing through the lens. The stop numbers (except the first one, i.e. "4.5") are so selected that the next higher number corresponds to half the volume of light trajected through the lens. For instance, if the lens is stopped down to "8", a certain amount of light passes through it; now, if the lens is stopped down to "11", the amount ot the trajected light will be equal to a half of that transmitted in the previous case; on the other hand, if the lens is stopped down to "5.6", the quantity of the trajected light will be doubled.

The stop ring is provided with a snapper device which snaps distinctly on setting the stop to any stop number. Thus, an accurate stop adjustment is facilitated when working in a dark chamber; it is only necessary to count the number of individual snaps and to adjust thus an arbitrary stop. In addition, the stop ring can be set arbitrarily between the individual positions marked with the stop number. The more the lens is stopped down, the better is its definition and the blur of the image caused by incidental inflection of the film frame is corrected or entirely remedied.

8. Exposure of sensitive paper

Effect the exposure of the sensitive paper by lighting up the lamp. Be careful not to shake the instrument, since any moving or shaking of the apparatus would result in a blurred picture. The exposure of sensitive paper can also be effected by alternate placing and removing of a red filter (Fig. VI-2). The sensitive paper can be exposed to the light transmitted through the red filter for approx. two minutes.

Fig. VII



curves = Neill pos.

9. Computation of enlargement ratio and exposure time

In order to facilitate work in determining the ratio of enlargement and in computing the exposure time when a change of the image magnification takes place, the oblique rod of the stand (Fig. I-7) is provided with a scale. The value indicated by the scale can be read on the lower edge of the adjustable mount (Fig. I-5). Alterations, if any, of the exposure time, expressed by the exposure factor, can be read on the nomogramme (Fig. VII). On the horizontal axis (i.e. on the scale) the basic (initial) position of the enlarger head is expressed by the divisions of the scales provided on the enlarger carrying rod. For this position, the exposure time has either been found by checks or is a known quantity. On the nomogramme vertical axis there is the exposure time coefficient — k —; by this exposure coefficient "k" the known exposure time for the initial position of the apparatus head has to be multiplied. The decisive parameter of the curves diagram is the new position of the enlarger head, this position being expressed with the aid of the divisions on the position scale. The exposure time value for this position has to be found.

~~Fig. VIII~~

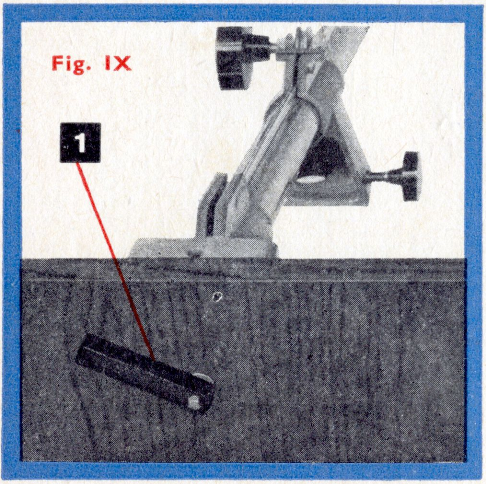


Fig. IX

The nomogramme for the lens F = 75 mm applies under the condition that the position of the head on the "11" division of the carrying rod corresponds to the 1 × magnification grade. If a masking easel is applied during the enlargement procedure, the readings on the scale of the rod have to be subjected to a reduction. Set an 1 × enlargement ratio on the applied easel for an F = 75 lens. Read the number of divisions, corresponding to the 1 × magnification, on the scale of the carrying rod. The reduced values are obtained when deducting 11 divisions from the number of divisions thus ascertained. When working with the nomogramme, this number has to be deducted from all the readings indicated on the position scale, and only the ascertained differences are applicable for determining the exposure time coefficient "k".

Example 1:

For a certain negative, the exposure time has been found and checked at the head position marked on the scale with the division "22". After having changed the magnification, the position was read on the division "45". The check has shown that the position of the division "11" corresponds to a 1 × magnification. The coefficient "k" = 3 is read on the nomogramme. The original exposure time was e.g., 8 seconds; the new exposure time will be 3 × 8, i.e., 24 seconds.

Example 2:

The exposure time for a given negative was tested (checked) with the head set to the position marked by the division "15". After the change of the magnification grade the position was read on the division "22". A check of the masking easel height showed that the

Fig. VIII ~~Fig. IX~~

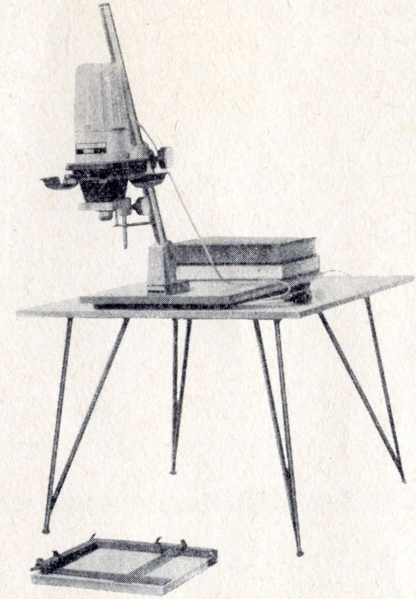
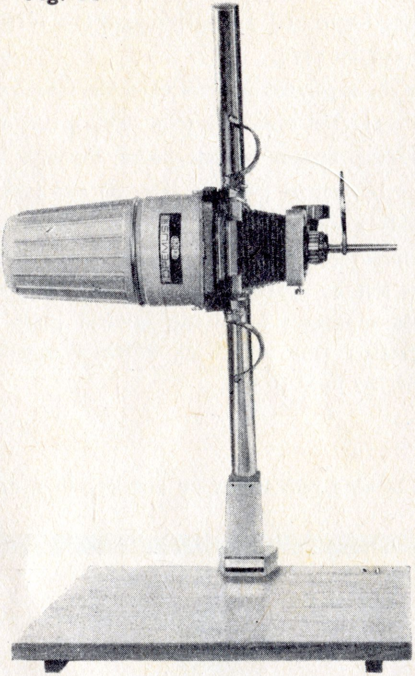


Fig. X



head position on the division "13" corresponds to the 1× enlargement ratio. Hence, when working with the nomogramme, the value 13—11 = 2 has to be deducted from the ascertained positions. Therefore, the fundamental position for work with the nomogramme will be 15—2 = 13, while the new position will be 22—2 = 20. The "k" value ascertained on the nomogramme is "2.06". The original exposure time was, e.g., 3.6 seconds; the new exposure time will be 3.6×2.06 = 7.5 seconds.

10. Enlarging with diffused light

If a softer-grain image has to be attained, especially if a negative with a hard gradation (key) has to be handled, the mounted ground glass has to be set on the condenser mount (Fig. XIV-2).

11. Enlarging outside of baseboard

If large-size enlargements have to be made, project the image outside the baseboard, either upon the floor or against a wall.

a) Projecting upon the floor:

Loosen the locking lever (Fig. IX-1) fitted on the stand foot, turn the apparatus together with its stand round its vertical axis through 180° and lock the stand in position by tightening the locking lever. Place the enlarger at the edge of the table desk. Load the baseboard with heavy objects (e.g., books). Project the image upon the floor or a chair.

b) Projection against a wall

If it is required to obtain a very large magnification, horizontal projection against a vertical wall can be used.

Place the apparatus on a normal table, loosen the hand-operated turnknob (Fig. XIV-1), turn the apparatus proper anticlockwise through 90° to or horizontal position (Fig. X) and lock it in this position by tightening the aforesaid hand-operated turnknob. Set up the enlargement size by approaching or setting apart the whole apparatus from the vertical plane of projection (the wall), on which a sensitive paper has been fixed.

12. Reduction

For making reductions or pictures in a ratio of 1 : 1 (for instance when handling slides) the following procedure has to be carried out:

Adjust the size of the image by rotating the focussing knob (Fig. I-4); then, by operating the manual knob (Fig. I-6), i.e., by the movement of the apparatus proper on the stand, effect the focussing of the image.

Hence, the procedure is contrary to that adopted when enlarging.

13. Partial restitution of image

Sometimes there are converging lines instead of parallel ones in the negative. This defect of the negative can be corrected in the following way:

Loosen the hand-operated turnknob (Fig. XIV-1), tilt the apparatus proper as required

Fig. XI

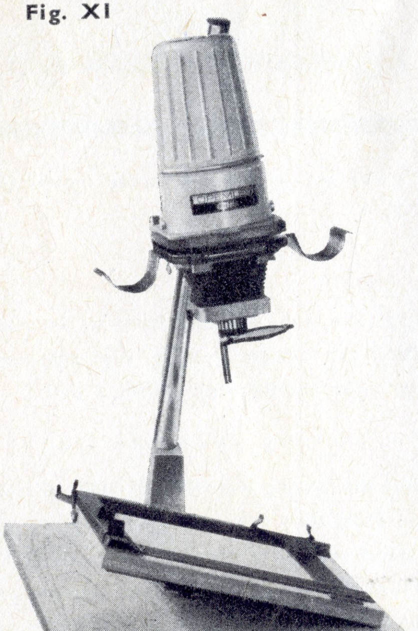
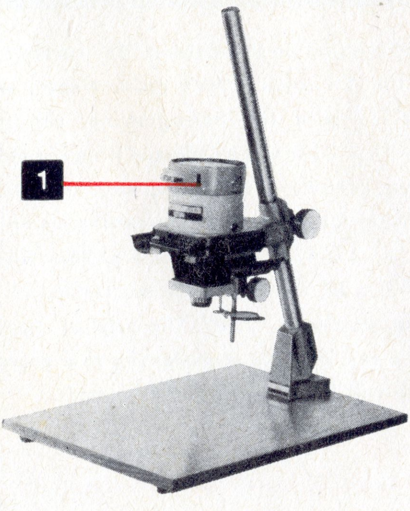
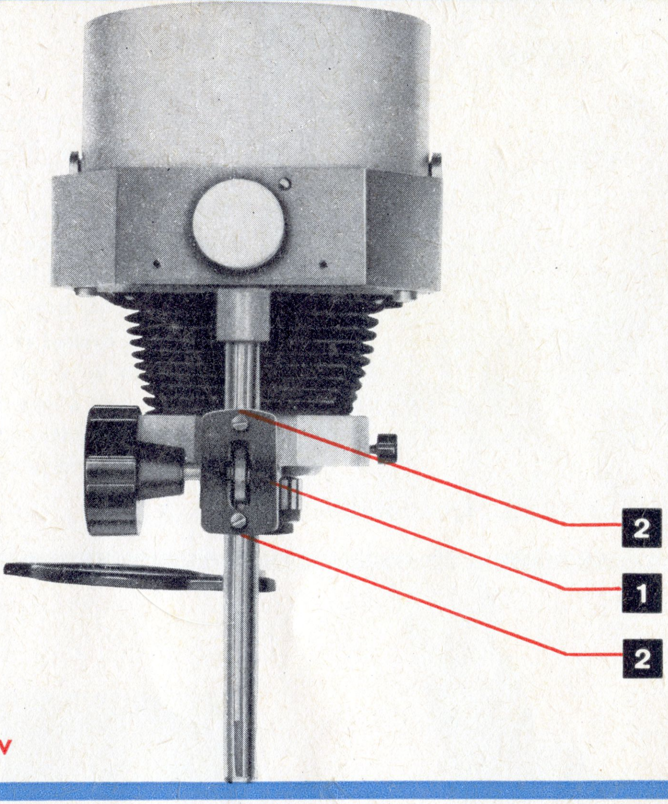


Fig. XII





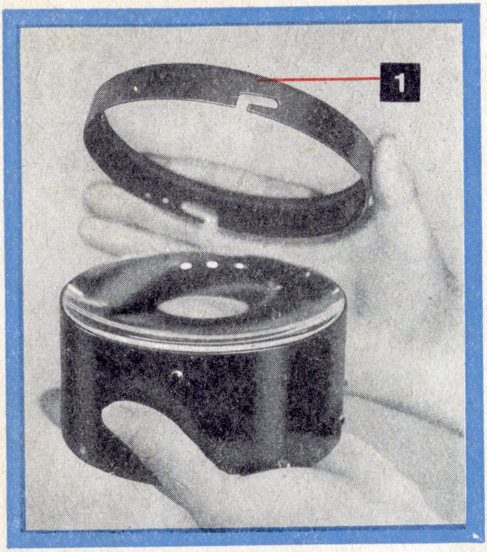
~~Fig. XIII~~ Fig. XV

until the converging lines of the image become parallel. Lock the apparatus proper in this position by means of the aforesaid turnknob (Fig. XIV-1). Since the whole field of the image cannot be perfectly focussed at a time, focus the aproximate centre of the image and then stop down the lens until the whole field becomes sufficiently sharp. The film band must be inserted properly into the carrier otherwise a contrary result would be obtained, i.e., the lines would become still more convergent that before.

14. Enlarging on colour material

If enlarging of colour negatives on a positive paper is required, special accessory devices have to be employed, i.e. the Meocolor — OPEMUS III adapter and a set of colour correction or equalizing filters, 7×7 cm in size. These filters are supplied by another producer.

Remove the lamphouse from the upper part of the apparatus. Set the Meocolor — OPEMUS III adapter (Fig. XII-1) onto the condenser mount and lock its position with a bayonet closure. Insert colour filters into the upper part of the Meocolor — OPEMUS III adapter. Four filters maximally can be inserted. They are protected against excessive heat by means of a heat filter located above the drawer. When inserting sensitive paper, the red filter must not be used, the work has to be done in specified light.

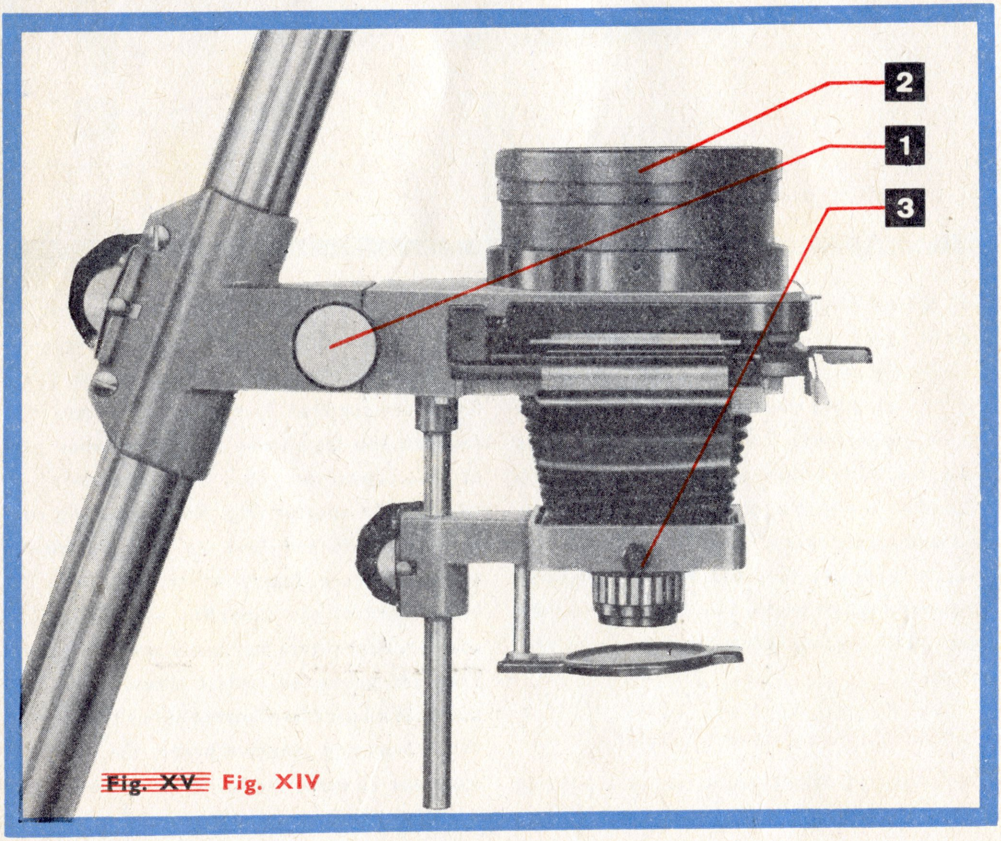


Maintenance of apparatus and replacement of negatives carrier glasses

a) Cleaning of condenser:

Remove the lamphouse (Fig. I-13), screw out the two screws (Fig. I-16) and take off the condenser mount (Fig. I-12). In this way the condenser becomes easily accessible. Grip its mount, turn it to the left and take the condenser out of the bayonet lock in an upwards direction. The outer surfaces of the condenser lenses have to be cleaned of dust with the aid of a fine hair brush or a soft, clean cloth. If also the inner surfaces of the lenses need cleaning, first remove the condenser lid (Fig. XIII-1) by turning it to the left and take out the upper lens.

~~Fig. XIV~~ Fig. XIII



~~Fig. XV~~ Fig. XIV

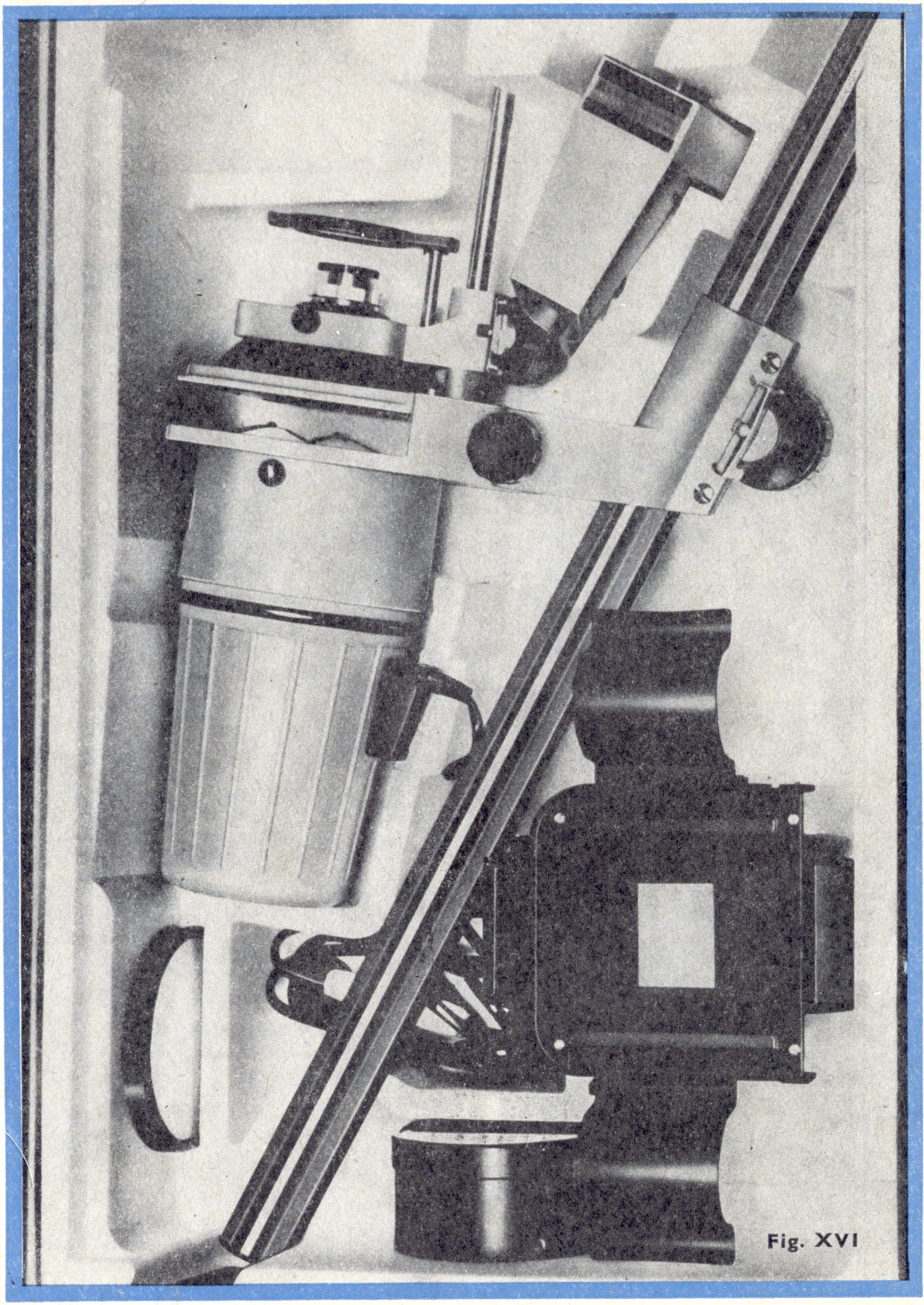


Fig. XVI

b) Cleaning of lens

Grip the lens with the fingers of your right hand and loosen the milled screw (Fig. XIV-3), until the ring of the lens together with the lens can be removed freely in the downward direction. Clean the two outer surfaces of the lenses (glasses) of dust with a fine hair brush or a piece of fine cambric linen.

c) Cleaning and replacement of negatives carrier glasses

Shift the stops (Fig. III-1) for guiding the film to the most distant extreme position from the centre of the carrier, i.e., in the direction towards the slit-line focussing system. Take the glasses (Fig. III-5) out of the carrier by sliding them sidewise.

d) Maintenance of friction mechanisms

The oblique rod of the stand (Fig. I-7) and the rod of the focussing mechanism (Fig. I-15) must be kept clean and, if necessary, smeared from time to time with a piece of cloth imbued with a small quantity of machine oil, vaseline or tallow. If after a longer time of service, the friction mechanisms springs (Fig. XV-1) show fatigue and the handwheels (knobs) move too freely, adjust the correct run by tightening the holding screw of the small springs (e.g., Fig. XV-2). The friction mechanisms run must be smoothly continuous and the position of the mechanism itself must not change spontaneously.

The complete OPEMUS III enlarger consists of

a) Enlarger proper with the stand and baseboard
b) Belar f/4.5, F = 75 mm with a cap
c) Condenser of 105 mm in diameter
d) Mounted ground glass (focussing screen)
e) Negatives carrier with glasses
f) Directions for use and guaranty certificate
g) Storing case

SPECIAL ACCESSORIES
TO OPEMUS III ENLARGER

A RICH ASSORTMENT OF ACCESSORIES TO THE OPEMUS III
ENLARGER CAN BE PURCHASED;
BY THE APPLICATION OF THESE ACCESSORY ITEMS,
THE APPARATUS BECOMES AN EXTREMELY UNIVERSAL INSTRUMENT
AND ITS APPLICABILITY IS SUBSTANTIALLY INCREASED.

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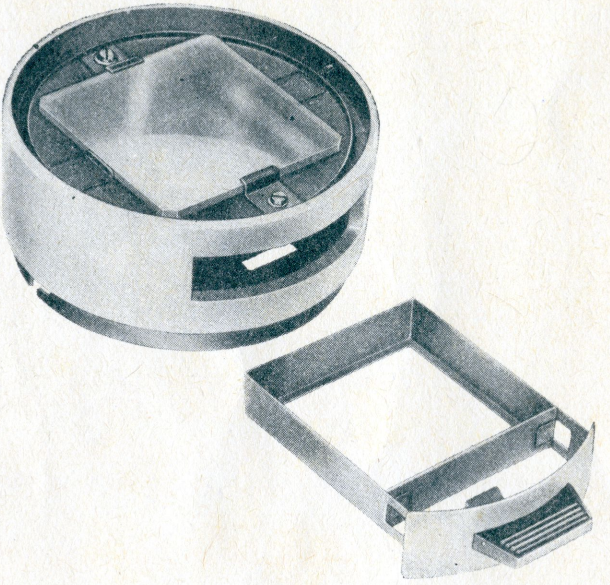
MEOKOLOR OPEMUS III



The Meocolor adapter is intended for use with the OPEMUS III, OPEMUS Standard, AXOMAT II and AXOMAT IIa enlargers. It allows the application of correction colour filters when enlarging on colour photographic paper by the subtractive method. The adapter is set on the enlarging apparatus between the condenser box and the lamphouse. The drawer of the adapter can take correction colour filters 7×7 cm in size. The correction filters are protected by means of a heat filter, located above the drawer. The mounting of the adapter is very easy:

1. Remove the lamphouse together with the lamp
2. Set the Meocolor onto the condenser box so that the handle of the drawer is in the front; lock the adapter in position by turning it a little in the bayonet cut.
3. Set the lamphouse with the lamp on the Meocolor adapter.

The drawer of the adapter can take maxim. four corrective colour filters.

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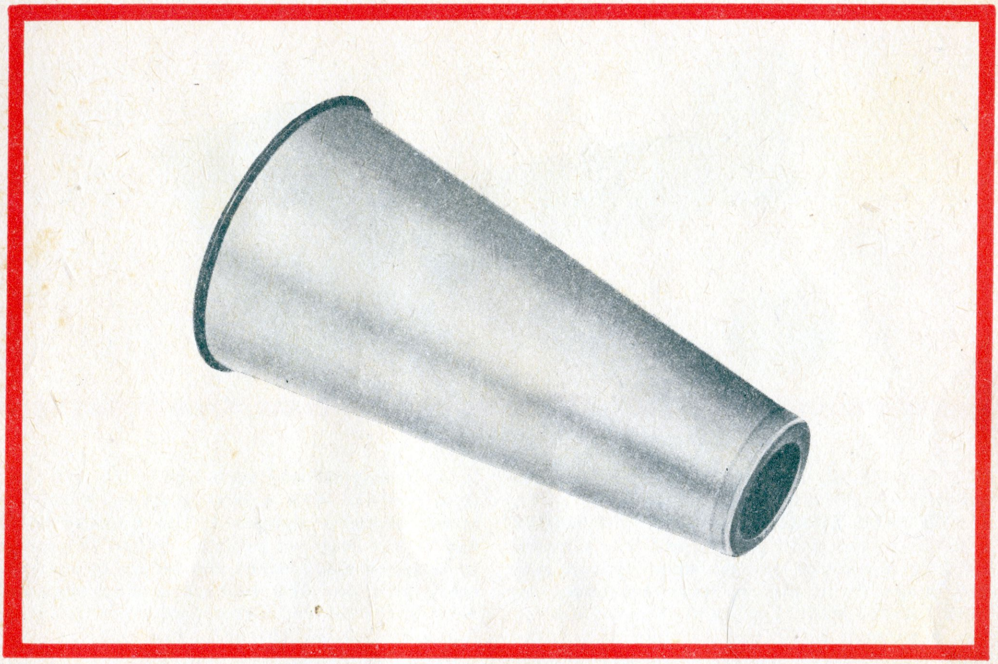
OPEMUS III MACRO-ADAPTER



The OPEMUS III macro-adapter is used when making reductions from negatives on the OPEMUS III and OPEMUS Standard enlargers, or for photographing very small objects with the aid of these apparatuses and using the OPEMUS III reproducing equipment Cat. No 78425 in this connection. With its larger diameter, the OPEMUS III macro-adapter has to be inserted into the lens holder in place of the original lens mount with the lens. Fixing is effected with the aid of a hand screw analogically as the fastening of the lens mount. The lens (objective) is screwed into the thread on the opposite end of the adapter tube. With the apparatus adapted in this way, reductions from negatives can be made or small objects photographed in an enlarged scale on a photographic plate within the magnification limits from approx. 40 × 40 to 20 × 20 mm. The size of the image is usually adjusted with the aid of the apparatus focussing knob. Focussing is effected preferably with the turnknob fitted on the stand, i.e., by sliding the whole apparatus along the rod of the stand.

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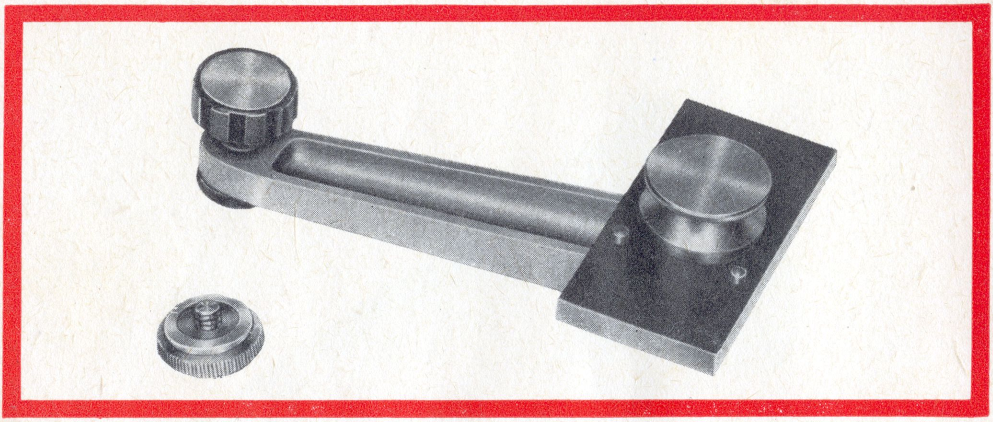
REPRODUCING BRACKET



The reproducing bracket is intended for use with the AXOMAT II, AXOMAT IIa, OPEMUS III, and OPEMUS Standard enlargers. It is used as a holder of the photographic and cine cameras (of 2 kg maximum weight) when reproducing the image from the enlarger baseboard or from another plane. Loosen the screw fastening the apparatus body and remove the latter from the enlarger stand. Mount the bracket in an analogical way onto the rider and lock it in position with a locking screw. With the screw properly tightened; the bracket holds fast in any required position. When the screw is loosened the bracket can be set to an arbitrary position. The bracket is also provided with a thread reduction (reduction adapter) for use with photo- and cine cameras with a small fixing thread.

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BELAR f/4.5, F - 55 mm LENS

Magnifying lens for enlarging negatives smaller than 6×6 cm, i.e. 4×4 cm, 3×4 cm and negatives from a 35 mm film.
Screw the lens into the countersunk ring forming an integral, removable part of the enlarger Opemus III. The lens has to be screwed into the countersunk ring in such a way that the tapered portion of the countersunk ring always be above.

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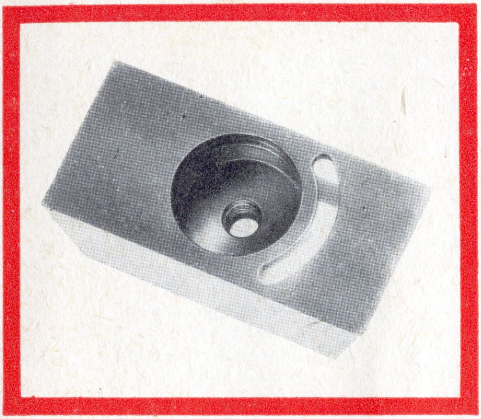
STAND REDUCTION PIECE



The stand reduction piece serves for fixing the enlarger head to a photographic stand (tripod) and thus allows the OPEMUS III, OPEMUS Standard, AXOMAT II and AXOMAT IIa enlargers in connection with the respective reproducing equipment; to be used as technical photographic cameras. Remove the enlarger head from the enlarger stand and insert the mount provided with a conical groove into the recess of the stand reduction piece; tighten with a fixing screw, taken out of the enlarging apparatus. With the aid of the 3/8" thread (provided in the reduction piece) fix the head onto the photographic stand.

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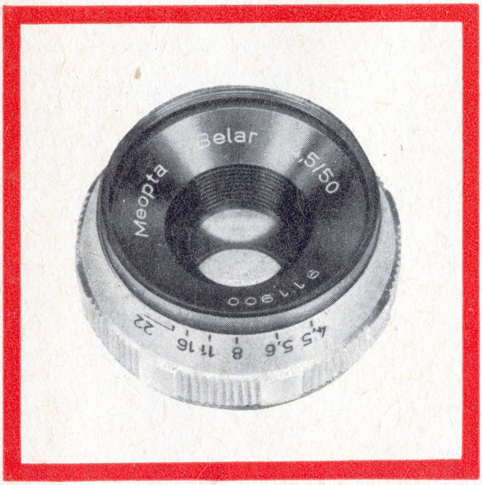
BELAR f/4.5, F - 50 mm LENS



A magnifying lens for enlargements of negatives from a 35 mm film.

Screw the lens into the countersunk ring forming an integral, removable part of the enlarger Opemus III. The lens has to be screwed into the countersunk ring in such a way that the tapered portion of the countersunk ring always be above.

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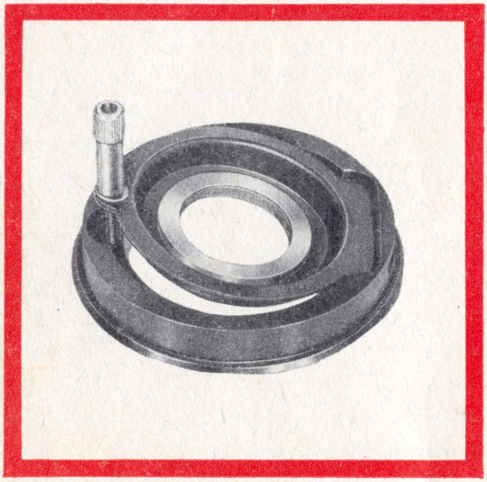
78228

RESTITUTION RING

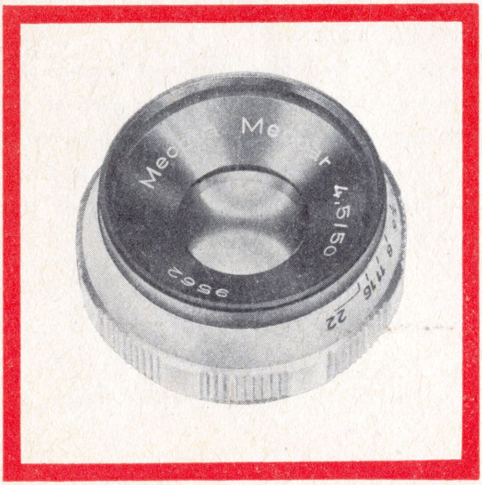


The restitution ring is intended for the AXOMAT II, AXOMAT IIa, OPEMUS III and OPEMUS Standard enlargers. With the aid of this ring the optical axis of the lens can be inclined and perfect restitution, i.e., correction of the image converging lines can be carried out. Insert the ring into the apparatus analogically as the lens mount, taking care that the axis of inclination runs parallel with the axis of rotation of the enlarger body on the stand. By turning the screw, the axis of the lens is inclined and thus axis deviation from the vertical, necessary for restitution, is attained. The good quality of the image within the whole field is obtained by setting a higher stop number on the lens or by suitable inclination of the whole enlarger head, or, possibly, by placing the positive material in a suitable way on an oblique plane.

OPEMUS III
meopta

70320.8

MEOPAR f/4.5, F - 50 mm LENS



A five-glass magnifying lens of high-quality for precision enlargements of negatives from a 35 mm film.

Screw the lens into the countersunk ring forming an integral, removable part of the enlarger Opemus III. The lens has to be screwed into the countersunk ring in such a way that the tapered portion of the countersunk ring always be above.

OPEMUS III
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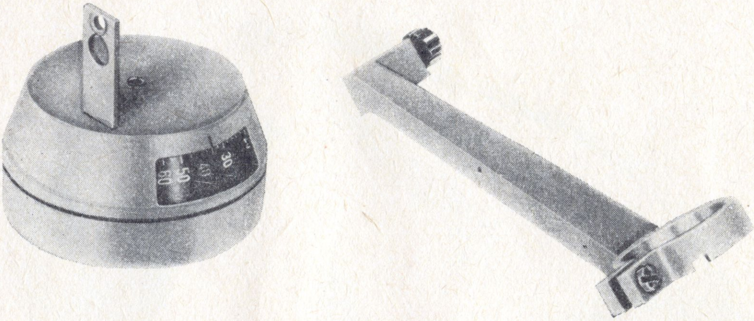
78426

EXPOSURE TIMER



The equipment serves for instantaneous determination of the exposure time duration, without any computing being necessary. Set on the scale an alredy proved exposure time at a certain magnification grade. When this magnification ratio is changed, the above equipment automatically moves the scale and indicates the exposure time for any other enlargement grade.

OPEMUS III
meopta

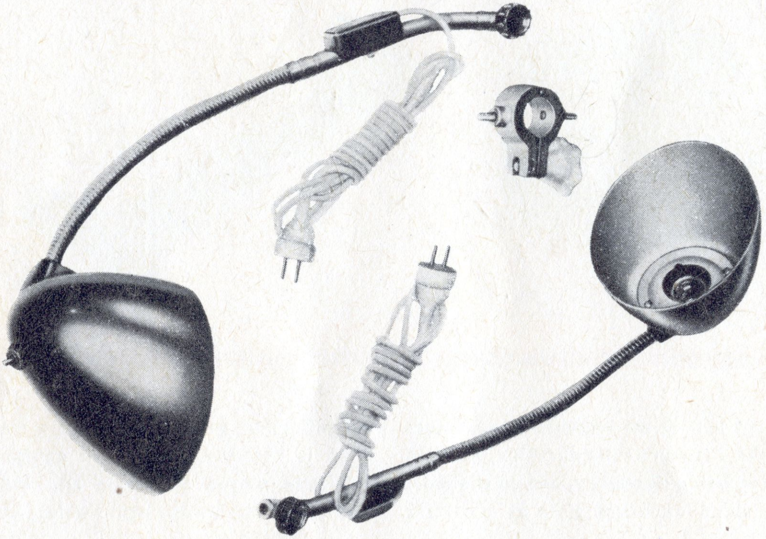
70325.8

MIRAR f/3.5, F - 35 mm LENS

A magnifying lens for enlarging of negatives 11×14 mm in size made on a 16 mm film.

78411

OPEMUS ILLUMINATOR

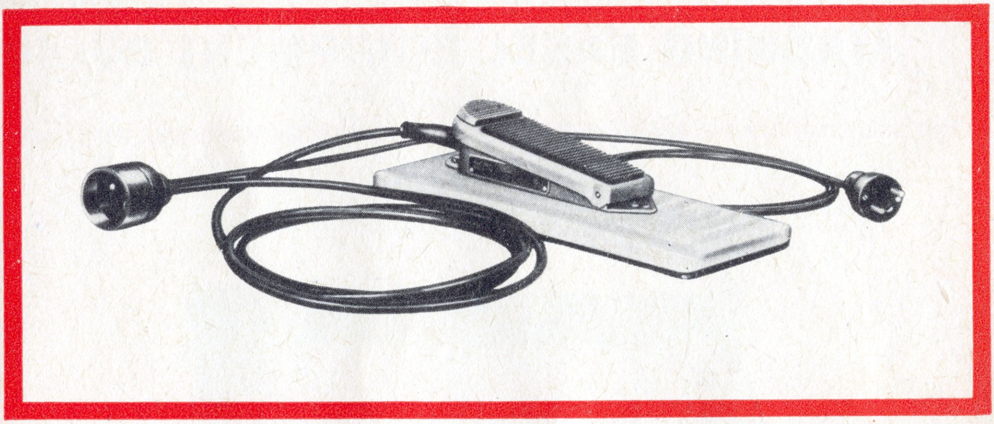


The OPEMUS illuminator is a useful and practical accessory of the apparatus and serves for illumination of the patterns and objects to be photographed; it is used in connection with the OPEMUS II, OPEMUS IIa, OPEMUS III, OPEMUS Standard, AXOMAT Ia, AXOMAT II and AXOMAT IIa enlargers; however, it can also be applied for all other MEOPTA enlargers provided with an oblique rod, i.e., for the AXOMAT, OPEMUS 4×4 and OPEMUS 6×6, on which various photographic operations can also be carried out or vaptions for amateur films made. Fix the illuminator holder with a clamping screw in the required height on the enlarger oblique stand and set the lighting fixtures on the pins of the holder. The flexible arms of the lighting fixtures (fittings) are easily adjusted so as to attain uniform illumination of the pattern or object to be photographed. Clear or opal bulbs of 40 W maximum power input are employed in the illuminator.

The operations to be performed when photographing or reproducing with the OPEMUS II, OPEMUS IIa, OPEMUS III, OPEMUS Standard, AXOMAT Ia, AXOMAT II and AXOMAT IIa enlargers are dealt with in the Paragraphs "OPEMUS II and OPEMUS IIa Reproducing Equipment" or "OPEMUS III Reproducing Equipment" and "35 mm Reproducing Equipment".

78903

FOOT SWITCH



The foot switch has been designed as a special accessory item to enlarging apparatuses. The purpose of the foot switch is to permit the operator to control the enlarger lamp i.e., to time the exposures by depressing a pedal, while having both his hands free. The foot-switch is intended for the needs of photographs--amateurs, or for handling amateur photographs in photo-laboratories.

The foot switch is provided with two electric cords. One end terminates in a plug, the other one in a socket. To the foot switch socket is connected the enlarger and the plug is slid into the el. mains service branch socket. By depressing the foot switch pedal, the electric line circuit is closed and the enlarger lights up. By releasing the pressure of the foot to the pedal, the light goes out. If it is desired that the enlarger lamp should glow for a longer time without having to keep one's foot on the pedal, the foot switch can be locked in position by operating the semi-circular locking device located on the movable part of the pedal.

The pedal locking is carried out as follows: depress the foot switch pedal and shift the locking device with your foot tip inwards (i.e. towards yourself); in this way the foot switch is locked and the lamp glows permanently. The permanent glowing of the lamp is switched off by shifting the locking device in the contrary direction, i.e., outwards (i.e. in the direction away from yourself); release the pressure on the pedal by removing your foot; the enlarger lamp ceases to glow.

The foot switch can also be located on the leg of the table on which the enlarging work is carried out, and the exposure (i.e., control of the lamp) is then effected with your knee. For this purpose, remove the cover from the bottom of the foot switch, this being done by loosening the respective screw with the aid of a screwdriver (the screw need not be screwed out), and by shifting the switch cover so that the head of the screw and of the pin fits into the hole; remove the cover. Screw in the wood screws with semi-circular heads into the table, respecting the pitch of the hole; these screws then serve for sliding on the foot switch.

OPEMUS III
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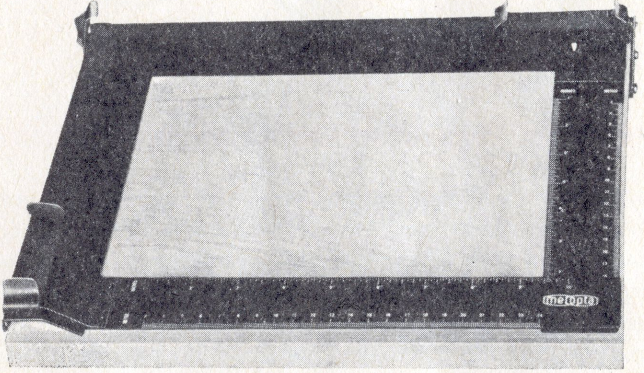
78301

MASKING EASEL EQUIPMENT 18x24

78302

MASKING EASEL EQUIPMENT 30x40



The masking easel equipment serves for speedy and easy holding of sensitive photographic paper and for providing the photographic pictures with a white margin.

To the baseboard is fastened a hinged frame with two graduated steel slide rules; the scales serve for setting the required dimensions during the enlarging procedure. In the left-hand upper corner is placed a sliding stop angle-piece by means of which the white margin is adjustable.

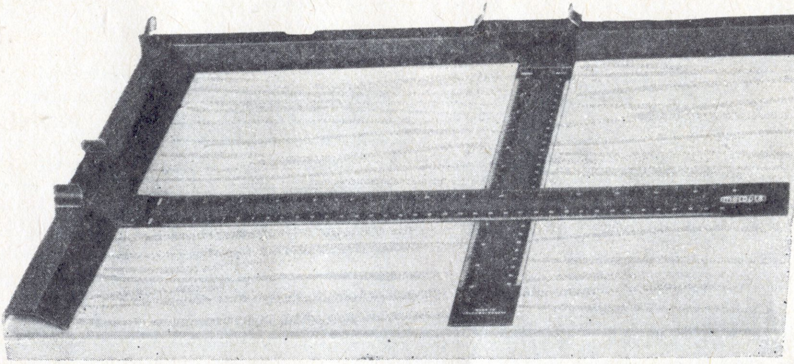
First, set the required size of the picture to be enlarged by means of the graduated steel slide rulers. Lift the hinged frame, insert the photographic paper and slide it underneath the stop angle- piece serving for the adjustment of the white margin. Return the hinged frame to its initial position; herewith the sensitive paper is held fast and the required white margin is provided.

The masking equipment is primarily intended for photo-amateurs, it can, however, also be applied for mass enlarging work carried out in specialized or industrial laboratories.

OPEMUS III
meopta

78302

MASKING EASEL EQUIPMENT 30x40



OPEMUS III
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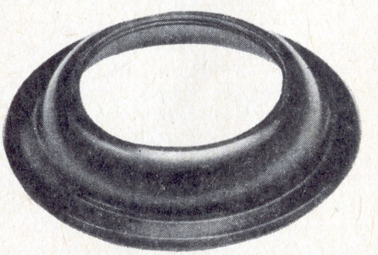


78249

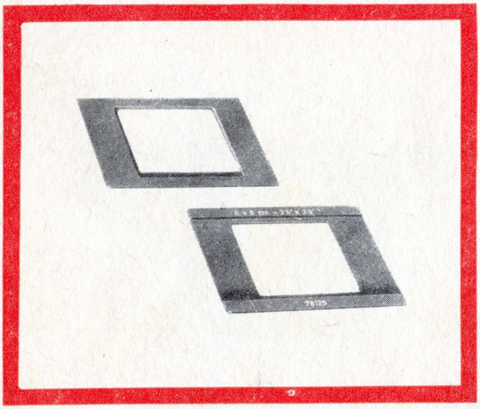
RING 39x1

The M 39×1 ring serves for fixing the lenses provided with an M 39×1 thread into the OPEMUS III, OPEMUS Standard, AXOMAT II and AXOMAT IIa enlargers. Place the ring with thre lens screwed-on into the apparatus instead of the original ring and lock it in position by tightening the hand screw.

OPEMUS III
meopta

78125

INSERTS 6x6 WITHOUT GLASSES



The 6×6 inserts are intended for inlarging without glasses, directly from the film band. They can be used in the carrier provided with sliding masks which constitutes a normal accessory item of the OPEMUS IIa and OPEMUS III enlargers and is supplied as an extra accessory also for the OPEMUS II apparatus. The inserts are employed to special advantage in the case of colour enlarging since formation of undesirable interference rings (so-called Newton rings), and projection of various impurities deposited on glasses are avoided.

The 6×6/6×6 inserts are inserted into the negatives carrier in place of glasses. Slide the bottom part of the insert, marked with the dimension indication, into the bottom part of the carrier, analogically as when inserting the glass. Insert the other part of the insert into the upper hinged part of the carrier. When the two halves of the carrier are closed, the inserts with their films guiding surfaces must contact each other. The plane of the inserts along which the film band passes, is exactly in the same position as when using the glasses. The enlarged image can, therefore, be focussed with the aid of the slit-line focussing system enclosed in the negatives carrier.

OPEMUS III
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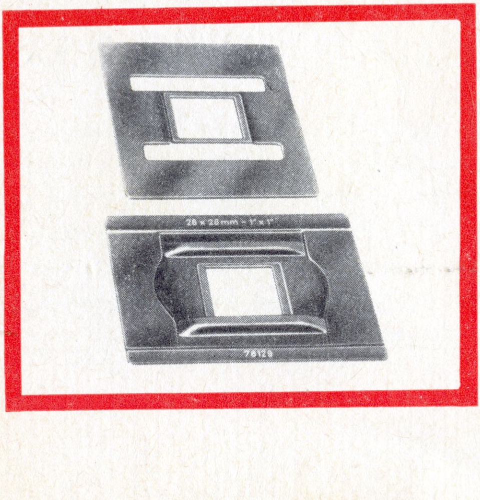
78129

INSERTS 6x6 INSTAMATIC

Inserts 6×6/28×28 are special accessories of the OPEMUS III enlarger (74220) negatives carrier. They are used when enlarging negatives of Instamatic film. The inserts have to be inserted into the carrier for negatives instead of glasses. The film band is then led in the carrier along the borders and not between the glasses. Application of these inserts without glasses prevents formation of undesirable interference rings (so-called Newton rings) which produce an extremely disturbing effect on the positive, especially in the case of colour photography. Also projection of various impurities, dust particles, etc., deposited on the glasses is avoided. Remove the two glasses from the carrier for negatives and replace them by the inserts. Slide the insert provided with the guiding lugs into the bottom part of the carrier, in the same way as the glass and place the insert provided with the holes for the bottom insert lugs into the upper part of the negative carrier. Adjust both inserts so that with the carrier closed, the hole of the bottom insert is not screened by the upper one.



OPEMUS III
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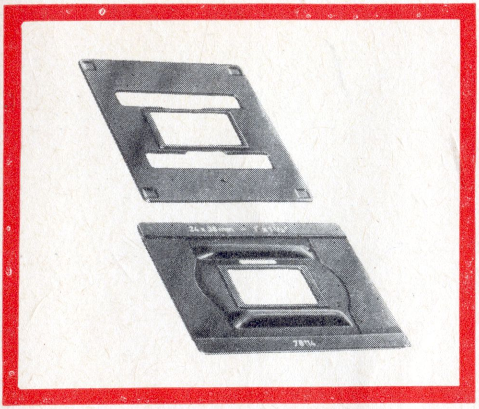
78114

INSERTS 6x6/24x36



These inserts are used for glass-less enlarging from perforated cine films 35 mm wide. They can be employed in the carrier provided with sliding masks which constitutes a normal accessory item of the OPEMUS IIa and OPEMUS III enlarger and is supplied as an extra (special) accessory to the OPEMUS II apparatus.

As a rule, the cine films are provided with a gelatine layer on one of their sides only. When enlarging from such negatives, inserted between the glasses, the so-called "Newton rings" are formed which produce a disturbing effect on the enlarged image. It is advantageous, therefore, and for colour enlargements necessary, to use the above-mentioned inserts which permit accurate enlarging of cine negatives of 24×36 mm in size even without the application of cover glasses.

The 6×6/24×36 inserts have to be inserted into the negatives carrier in place of glasses. Slide that part of the insert which is provided with guiding lugs into the bottom part of the carrier in the same way as the glass and place the other part of the insert, i.e., that provided with holes for the bottom insert lugs, into the upper hinged part of the carrier, again analogically as the glass. The image cut-out of both parts of the insert is framed with a smooth, un polished guiding frame. With the negatives carrier closed, the two glossy guiding frames must contact each other. Since the plane of these guiding frames is set and produced with precision, the enlarged image can also in this case as usually be focussed with the aid of the slit-line focussing system. Figures or notes, marked on the film band margin are projected through narrow, longitudinal holes in the insert. During the exposure these holes can be covered by means of the sliding masks of the negatives carrier so as to prevent the disturbing effect of the transmitted light

OPEMUS III
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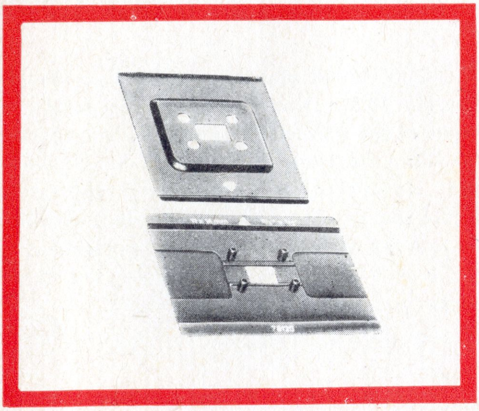
78120

INSERTS 6x6/11x14



The 6×6/11×14 inserts constitute special accessories of the OPEMUS IIa and OPEMUS IIIa negatives carrier provided with sliding masks — Cat. No. 78116. They are employed when enlarging the negatives originating from the Mikroma camera. Application of these inserts prevent the formation of undesirable interference rings (so-called Newton rings) which have a very disturbing effect on the positive, especially in the case of colour photography. Also projection of various impurities or scratches that might be shown on the glasses is avoided. All these flaws produce a very disturbing effect on the positive, especially in the case of highgrade linear magnification of a small negative, and have to be removed by the rather laborious procedure of retouching.

The 6×6/11×14 inserts are placed into the negatives carrier instead of the original glasses. Place the insert provided with the holes for guiding lugs into the upper part of the carrier; the triangle mark has to point towards the carrier slit-line focussing mechanism. The bottom insert provided with guiding lugs has to be handled analogically. Adjust both inserts so that with the carrier closed, the longitudinal hole of the bottom insert is not screened by the upper insert.

OPEMUS III
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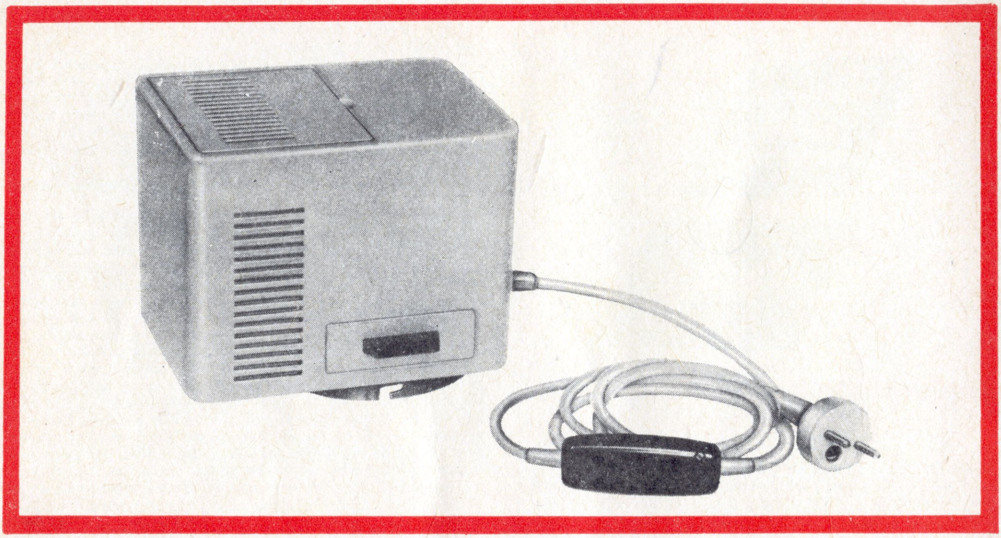
78509

HEAD WITH PROJECTION LAMP

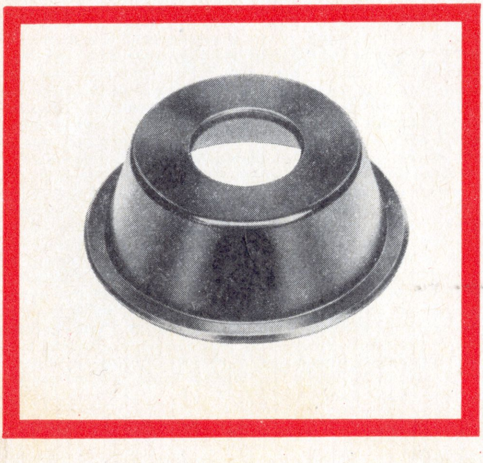


With the aid of this accessory a sixtimes shorter exposure time can be attained for the enlargement procedure. The head employs a 100 W projection lamp. Its drawer can take four 7×7 cm corrective filters. The head with the projection lamp has to be set on instead of the lamphouse.

OPEMUS III
meopta

78229

RECESSED ADAPTER RING FOR F - 35 mm



The OPEMUS III adapter ring for F = 35 mm, Cat. No. 78229 belongs among special accessory items of the OPEMUS III enlarger. It is applied for fixing the Mirar f/3.5, F = 35 mm lens into the afores-mentioned enlarging apparatus. Insert the adapter ring with the lens screwed on into the enlarger in place of the original ring and lock it in position by tightening the milled screw.

OPEMUS III
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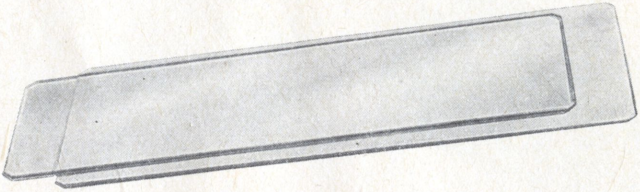
78117

GLASSES FOR INDIVIDUAL NEGATIVES



Cover glasses used when enlarging individual frames cut of a film band.

OPEMUS III
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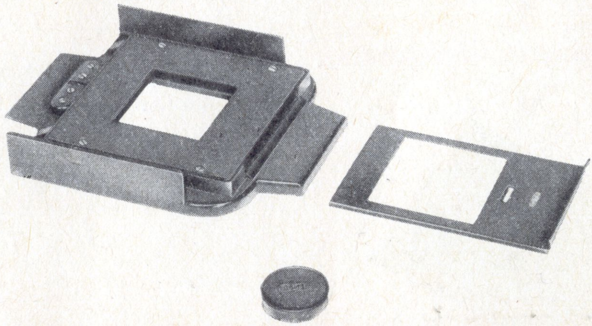
78425

OPEMUS III REPRODUCING (Copying) EQUIPMENT



The equipment is used for reproduction-type photographic work. It is inserted into the apparatus in place of the negatives carrier. Sheet films or photographic plates 6.5×9 cm in size, accommodated in normal plate holders are applied for this equipment.

OPEMUS III
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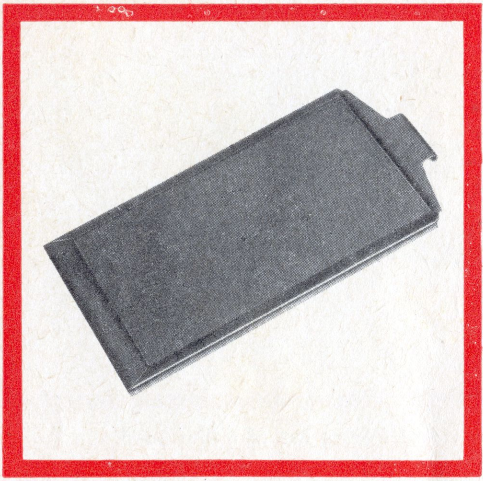
73606

CASSETTE (Plate holder) 6.5x9



A metal cassette (plate holder) for 6.5×9 cm photographic plates. This is an accessory to be placed among the reproducing (copying) equipment.

OPEMUS III
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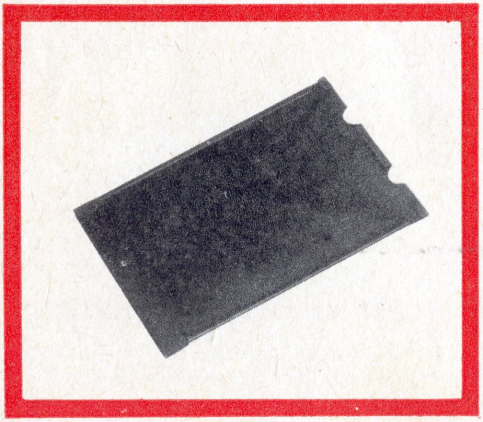
73607

CASSETTE INSERT



A metal insert for accommodation of 6.5×9 cm sheet films, to be placed into the 6.5×9 cm cassette (plate holder).

OPEMUS III
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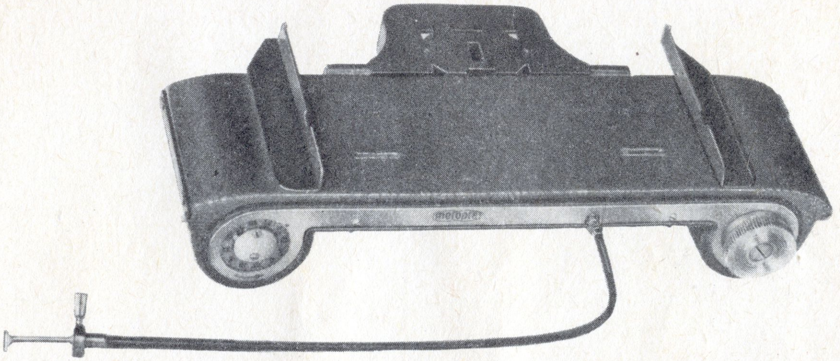
78414

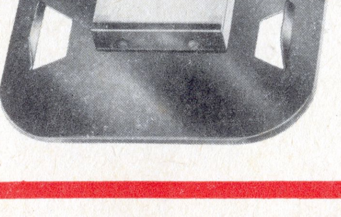
35 mm REPRODUCTION EQUIPMENT



It enables to make precision reproductions, macrophotos of small objects etc. on 35 mm cine film of 1,60 m standard lenght, charged in a casette, or on 35 mm cine film up to the 5 m lenght, wound up on a special reel. It has slit focusing system, special shutter, blocking device, picture counter, cable release and slidable; knife for the eventual cutting off of the exposed part of film.

78440

FOCUSING GROUNDGLASS



OPEMUS III
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In combination with the 35 mm reproduction equipment, type 78414, the focusing groundglass enables to use the enlarger models Axomat II and Opemus Standard for technical photography. In addition to image focusing on the focusing groundglass the ilumination of object may be judged, the reflections on glaring surfaces may be observed etc.

NOTE:

Due to continuous development, the design details are subject to alterations without notice. In consequence, minor discrepancies may arise between the description or illustrations contained in the present "Directions" and the apparatus supplied.

47220 - N - 72a — Grafia 01, Brno

Printed in Czechoslovakia

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